

Compression/Softness

Vantage^{NX} Tensile Tester

The Vantage^{NX} Compression/Softness Tester provides an objective measure of material softness. In order to do this MAP4 Software is used to evaluate a combination of factors including sample loft, thickness, compressibility and structural softness of sheet materials including paper, tissue, toweling, nonwovens and textiles.

Test Procedure

For the highest level of accuracy, the Vantage Compression/Softness Tester compresses test plates to a user-defined force value with no sample installed resulting in a curve that represents the deflection of the machine, load cell and fixture. This curve is subtracted from the test curves which removes all instrument deflection which could effect test results.

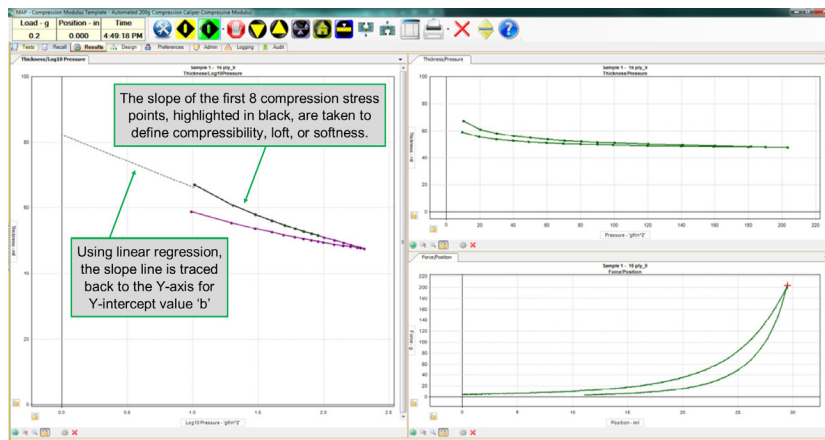
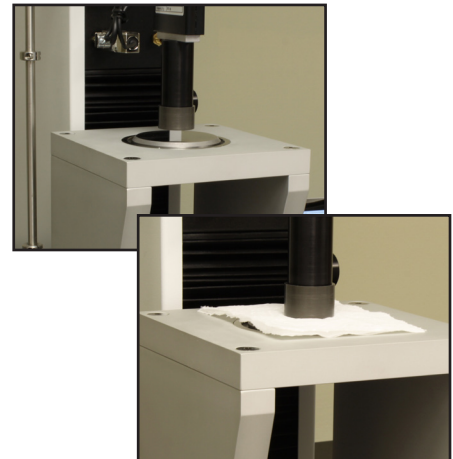
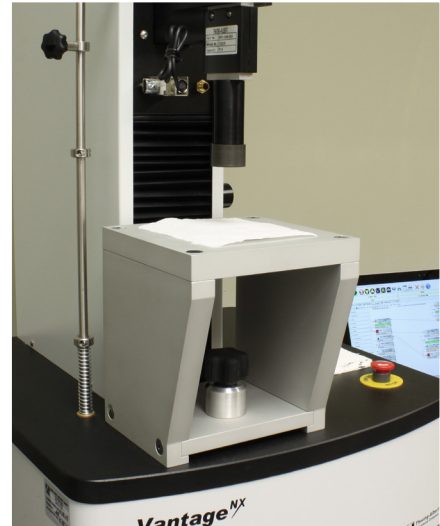
During a test, thickness values are captured until the maximum load is reached. Thickness values are captured in both the compression and recovery phase resulting in two unique curves. The distance between the two curves represents energy lost and is a function of several properties including loft, thickness, compression/recovery, and structural softness.

Machine Setup:

Load Cell: 50N Capacity shown

Pressure Foot: 1.0 IN² Standard (different sizes available)

Lower Anvil: Adjustable for parallelism requirements



FEATURES

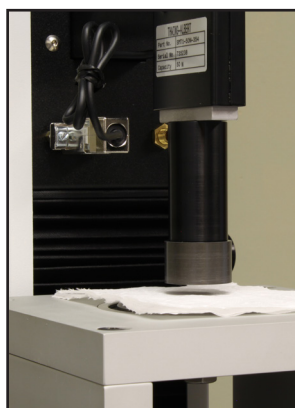
- MAP4 Software
- Windows Compatible
- USB Interface to a PC
- Serial Load Cell Interface
- Movable Test Control Panel
- Push-button auto zero



PHYSICAL SPECIFICATIONS

	1900-2008*
Width	410 mm (16 in)
Depth	432 mm (17 in)
Height	1143 mm (45 in)
Net Weight	51 kg (112 lb)
Crosshead Travel	610 mm (24 in)

*Above Dimensions do not include PC



Compression Fixture with Pressure Foot & Anvil

Extremely robust, the adjustable anvil is mounted securely to the test frame. A pressure foot is also supplied which, in conjunction with a gage block, enables parallel adjustment of the anvil to 1 micron (0.00004inch / 0.001 mm).

PERFORMANCE DATA

Crosshead Guidance

Precision Ball Screw

Horizontal Clearance

Unlimited

Depth Clearance

89 mm (3.5 in)

Force Capacity

1 kN (225 lbf)

Force Measurement

High precision 2 kN (450 lbf) load cell

Force Accuracy

10% to 100% Load Capacity:
±0.25% Measuring Value

Less than 10% Load Capacity:
±0.025% of Load Cell Capacity

Force Resolution

15 bit ADC (0.003% of 1.15 x Load Cell Capacity)

Position Resolution

0.17 µm (6.7 µin)

Position Accuracy

±6.4 micron/25 mm (± 0.00025/1.0 inch)
or 0.025% of Distance

System Control

PC-Based with USB interface

Operating System

Windows® Compatible

Crosshead Speed

1.3 to 1000 mm/min (0.05 to 40 in/min)

Crosshead Speed Accuracy

0.1 to 30 in/min: 1% of Set Speed
<0.1 in/min: 2% of Set Speed
>30 in/min: 2% of Set Speed

Safety Features

- Emergency Stop Button
- Upper and Lower Limit Switches with over-travel protection
- Electronic Grip Collision Detection
- Electronic Load Cell Overload Protection
- Mechanical Load Cell Overload Protection

Maximum Power Consumption

72 VA

Power Requirements

120-230 VAC ±10%, 50/60 Hz

Operating/Storage Environment

Air Temperature

Operating: 10° to 50° C (50° to 122° F)

Storage: -25° to 70° C (-13° to 158° F)

Relative Humidity:

Operating: 10% to 85% (Non-Condensing)

Storage: 5% to 90% (Non-Condensing)

Specifications subject to change without notice.



Thwing-Albert
Instrument Company

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